

FAO World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD)

Genotyping Report

FMDV serotype: A
Country: Turkey
Year: 2017
Batch: WRLMEG/2017/00045
No. of sequences: 1
Report date: 14th July 2017
Report generated by: Nick Knowles
Report checked by: Kasia Bankowska



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www: <http://www.wrlfmd.org/>

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Virus sample name:	Kars/265/2017.481
Sender reference:	A/Kars/265/2017.481
Location of origin:	Kars
Country of origin:	Turkey
Date of collection:	25/06/2017
Host species:	
Serotype:	A
Topotype:	ASIA
Lineage:	G-VII
Sublineage:	
Sequence length:	633
Ambiguities:	2
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	14/07/2017
Last updated:	14/07/2017
VIBASys IDs: sample 34049, genome 34050, sequence viba_34051, sequencing info 34052	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_25140	ARM/2/2015	cattle	97.5	0	A	ASIA	G-VII	
viba_32164	TUR/1210/2016.750	cattle	97.3	0	A	ASIA	G-VII	
viba_25136	ARM/1/2015	cattle	97.3	0	A	ASIA	G-VII	
viba_32160	TUR/1008/2016.500	cattle	97.3	0	A	ASIA	G-VII	
viba_32140	TUR/198/2015.808	cattle	97.3	0	A	ASIA	G-VII	
viba_32136	TUR/175/2015.712	cattle	97.3	0	A	ASIA	G-VII	
viba_25144	ARM/3/2015	cattle	97.3	0	A	ASIA	G-VII	
viba_25854	IRN/25/2015	cattle	97.2	0	A	ASIA	G-VII	
viba_25313	TUR/203/2015.827	cattle	97.2	0	A	ASIA	G-VII	
viba_25822	IRN/13/2015	cattle	97.2	0	A	ASIA	G-VII	

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_864	IND/40/2000	cattle	90.4	0	A	ASIA	G-VII	
viba_843	SAU/16/95		89.6	0	A	ASIA	G-VII	
viba_336	IRN/1/96	bovine	84.0	1	A	ASIA	Iran-96	
viba_677	IRQ/24/64	bovine	83.2	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	82.8	0	A	ASIA	Iran-87	
viba_699	UKG/119/32		82.0	0	A	EURO-SA	A12	
viba_319	BAR/6/2008	bovine	81.8	0	A	ASIA	Iran-05	BAR-08
viba_403	TUR/1/2008	cattle	81.7	0	A	ASIA	Iran-05	ARD-07
viba_414	AFG/6/2007	bovine	81.7	0	A	ASIA	Iran-05	AFG-07
viba_331	AFG/10/2010		81.4	0	A	ASIA	Iran-05	HER-10

Report on FMDV A in Turkey in 2017

Batch: WRLMEG/2017/00045



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLMEG/2017/00045-Turkey-A (1 sequences)
Sequence database set:	allseqs_A (1668 sequences)
Prototype sequence set:	!prototypes_A (34 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	633
Phylogeny reconstruction method:	fdnadist, fneighbor
Number of bootstrap samples:	1000
Random seed for bootstrapping:	1
Displaying bootstrap values above:	70.0%
Number of sequences in tree capped at:	100
Number of prototype sequences in tree:	10
VIBASys version:	master-1.1.0-17-gf69a4d1

Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/A

label	accession	host(s)	lab	country	taxonomic information
Kars/265/2017.481*	n/a	n/a	FMDI	Turkey	ASIA/G-VII
TUR/1210/2016.750*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/1008/2016.500*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/1193/2016.731*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/1218/2016.769*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/1225/2016.769*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
Qela/ISR/2017*	n/a	cattle	KVI	Israel	ASIA/G-VII
Aramsha/ISR/2017 probang*	n/a	cattle	KVI	Israel	ASIA/G-VII
Aramsha/ISR/2017 epith*	n/a	cattle	KVI	Israel	ASIA/G-VII
IRN/4/2017	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
SAU/42/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/20/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/37/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/19/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/40/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/41/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/8/2015	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/15/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/21/2015	n/a	bovine	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/7/2015	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/17/2015	n/a	ovine	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/16/2015	n/a	ovine	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/15/2015	n/a	ovine	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/14/2015	n/a	ovine	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/5/2015	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/2/2015	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/6/2015	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/1/2015	KU127247	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/9/2015	n/a	bovine	WRLFMD	Saudi Arabia	ASIA/G-VII
PD78/IND/2015*	n/a	n/a	PD-FMD	India	ASIA/G-VII
SAU/21/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/24/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/22/2016	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/3/2015	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
SAU/4/2015	n/a	cattle	WRLFMD	Saudi Arabia	ASIA/G-VII
IRN/25/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII

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label	accession	host(s)	lab	country	taxonomic information
IRN/12/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
ARM/2/2015	n/a	cattle	ARRIAH	Armenia	ASIA/G-VII
IRN/39/2016	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/8/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/18/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/17/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/22/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/21/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/13/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/14/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
TUR/48/2016.019*	n/a	sheep	FMDI	Turkey	ASIA/G-VII
IRN/27/2015	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/8/2016	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
TUR/203/2015.827*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/305/2015.923*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/175/2015.712*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
IRN/1/2016	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/20/2016	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/11/2016	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/23/2016	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
IRN/12/2016	n/a	cattle	WRLFMD	Iran	ASIA/G-VII
TUR /198/2015.808*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/219/2015.865*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
TUR/331/2015.923*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
ARM/3/2015	n/a	cattle	ARRIAH	Armenia	ASIA/G-VII
ARM/1/2015	n/a	cattle	ARRIAH	Armenia	ASIA/G-VII
TUR/1227/2016.750*	n/a	cattle	FMDI	Turkey	ASIA/G-VII
BAN/GA/Sa-197/2013*	KJ754939	cattle	University of Dhaka	Bangladesh	ASIA/G-VII
IND/256/2012(582)*	n/a	n/a	PD-FMD	India	ASIA/G-VII
BAN/BD/SI/16/2013*	KR869773	cattle	University of Dhaka	Bangladesh	ASIA/G-VII
BD SI 35 2013*	KU684494	cattle	BAU	Bangladesh	ASIA/G-VII
BD BAU ML4 2014*	KT982205	cattle	BAU	Bangladesh	ASIA/G-VII
IND/9/2009*	HQ127716	cattle	PD-FMD	India	ASIA/G-VII
IND/11/2009*	HQ127717	cattle	PD-FMD	India	ASIA/G-VII
IND/13/2009*	HQ127718	cattle	PD-FMD	India	ASIA/G-VII
IND/17/2009*	HQ832592	cattle	PD-FMD	India	ASIA/G-VII
IND/17/2009*	HQ127719	cattle	PD-FMD	India	ASIA/G-VII
IND/245/2007*	HQ127704	cattle	PD-FMD	India	ASIA/G-VII
IND/360/2007*	HQ127705	cattle	PD-FMD	India	ASIA/G-VII
IND/360/07*	FJ617243	bovine	PD-FMD	India	ASIA/G-VII
IND/245/2007*	HQ832590	cattle	PD-FMD	India	ASIA/G-VII
IND/413/2007*	HQ127707	cattle	PD-FMD	India	ASIA/G-VII
IND/417/2007*	HQ127708	cattle	PD-FMD	India	ASIA/G-VII
BHU/4/2003	n/a	n/a	WRLFMD	Bhutan	ASIA/G-VII
BHU/35/2003	n/a	n/a	WRLFMD	Bhutan	ASIA/G-VII
BHU/7/2003	FJ755012	cattle	WRLFMD	Bhutan	ASIA/G-VII
BHU/6/2003	n/a	n/a	WRLFMD	Bhutan	ASIA/G-VII
BHU/41/2002	EU414525	bovine	WRLFMD	Bhutan	ASIA/G-VII
BHU/8/2003	n/a	n/a	WRLFMD	Bhutan	ASIA/G-VII
BHU/42/2003	n/a	n/a	WRLFMD	Bhutan	ASIA/G-VII
BHU/27/2003	FJ755013	cattle	WRLFMD	Bhutan	ASIA/G-VII
SAU/16/95	EU553874	n/a	WRLFMD	Saudi Arabia	ASIA/G-VII
IND/53/08*	FJ617241	bovine	PD-FMD	India	ASIA/G-VII
IND/53/2008*	HQ127709	cattle	PD-FMD	India	ASIA/G-VII
IND/40/2000*	AF390646	cattle	PD-FMD	India	ASIA/G-VII
IRN/1/96	EF208771	bovine	WRLFMD	Iran	ASIA/Iran-96
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
TUR/1/2008	FJ755133	cattle	WRLFMD	Turkey	ASIA/Iran-05/ARD-07
BAR/6/2008	FJ755010	bovine	WRLFMD	Bahrain	ASIA/Iran-05/BAR-08
AFG/6/2007	FJ755007	bovine	WRLFMD	Afghanistan	ASIA/Iran-05/AFG-07
AFG/10/2010	KY091293	n/a	WRLFMD	Afghanistan	ASIA/Iran-05/HER-10
IRN/2/87	EF208770	bovine	WRLFMD	Iran	ASIA/Iran-87
UKG/119/32	M10975	n/a	PIADC	United Kingdom	EURO-SA/A12
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24

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label	accession	host(s)	lab	country	taxonomic information
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III

*, not a WRLFMD Reference Number

n/a, not available